

THE GARDEN STATE



One of the many fine potato farms in central Jersey, where white potatoes have been important for more than a century.

SPUDS and SWEETS

Contrasting Conditions in New Jersey Make Potato Growing Ideal—Moderate Summers and Rich Loam for the Irish Variety With an Arid Season and Sandy Soil for the Morning Glory Relative

By JOHN T. CUNNINGHAM

SWEETS are sweets and spuds are spuds and never the vines shall meet may be poor Kipling paraphrasing, but it's a good way to introduce potatoes in New Jersey—since here potatoes mean both sweet and Irish (white) potatoes, alike only in that each grows beneath the ground. The fact that both grow abundantly in New Jersey is due to the state's highly varied nature rather than to any kinship.

Irish potatoes grow best where summers are not hot, where rainfall is

regular and where the soil is a moderately rich loam. Sweets, on the other hand, need a long season of warm days and nights, thrive even during an arid summer and yield best in a sandy soil. Only a very few areas have such contrasting conditions; New Jersey is one of the few.

A short half century ago, "potatoes" meant white potatoes—sweets were dismissed casually, if not scornfully, in many Northern markets. Today, with white production and prices

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This is the sixth in a series of articles on New Jersey's highly diversified agriculture, vigorous and growing despite the constant inroads of industrial and residential development. Next week: The Dairy Industry.



Sweet potatoes awaiting gatherers on farm at Malaga, Gloucester County, which has long been the state's top golden root producer.

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down and sweet production and prices up, New Jersey farm income from the sweet potato is close to the Irish spud. In 1953, sweets actually out-ranked white potatoes—\$7,700,000 for the orange tubers to \$5,400,000 for the spuds of Erin. It is a sad day, indeed, for the food which Irish policemen of the 1890s proudly admitted gave them such a broad outlook.

It must be pointed out that 1953 was a rather abnormal year, pricewise, since sweets brought unusually high prices and whites brought unusually low prices. The important point to remember is that potatoes of both varieties annually cover some 40,000 New Jersey acres—and sweets at the moment seem to be in the ascendancy as whites appear to be in a decline.

NEVERTHELESS, white (or Irish) potatoes are a fascinating study of the complications which have made 20th century agriculture such a far cry from the old days of "as ye sow, so shall ye reap." Modern farming practices have brought huge potato yields, in an era when modern diet fancies have brought sharply decreased demand. Subsidies, so much a part of American farming in the last two decades, stimulated white potato growing—then seriously crippled the industry.

Meanwhile, despite the fact that sweet potato production has fallen off radically in most of the nation and particularly in the Southern states, New Jersey growers of sweet potatoes have increased production—at a time when demand for Jersey-grown sweets has risen. As far as subsidies are concerned, sweet potato growers never had their coffers sweetened by government funds and thus didn't have to adjust to chaotic conditions when the government hand was withdrawn.

So, truly never the vines shall meet. Accordingly, it is best to discuss one, then the other. Sweets and whites don't even belong to the same family; sweets are a member of the morning glory family, whites are close cousins of the tomato, the eggplant and other members of the nightshade clan.

That relationship to such as the tomato and the eggplant led to the Irish potato having a somewhat black eye back in Colonial days, since some of the first English settlers who planted the seed waited until blossoms turned to seed balls. They harvested the balls, but no amount of boiling or baking or frying or chewing made them palatable. Understandably, they wondered at the tastes of their Scotch-Irish neighbors, even though potatoes had been imported from South America to England as early as the 16th Century.

Later, when it became generally known that the tuber rather than the pod gave both eating pleasure and nourishment, prejudice continued. Most people believed the white potato would shorten a man's life. For years (at least until 1740) a master taking a boy as an apprentice had to agree that the boy wouldn't be required to eat

potatoes. Masters agreed readily; no use taking a chance on shortening an apprentice's life.

WHEN and where white potatoes first appeared in New Jersey is anybody's guess, although by 1839 the state produced more than 2,000,000 bushels annually. Monmouth produced more than 25 per cent of that total and—surprise—Morris and Sussex counties produced another 20 per cent each. Now, of course, Morris and Sussex have virtually no potato importance.

Wave after wave of Irish immigrants hit this country's shores in the 1840s and 1850s—forced from their homeland by the potato famine, welcomed in America to build the railroads. They brought their love of spuds to their new land and their arduous work caused them to continue eating energy-producing potatoes. The result was skyrocketing potato production—up in New Jersey to 3,000,000 bushels in 1849, to 4,000,000 bushels in 1859, to nearly 5,000,000 bushels in 1869. Potatoes proved more profitable than oats as a spring crop, and farmers always had their eyes peeled for a good income.

Monmouth County always ruled supreme in potato circles, and soon all potato growing shifted gradually to the greensand marl belt running in an arc down through Monmouth, Middlesex, Mercer, Burlington, Camden, Gloucester, Salem and Cumberland counties. Probably that's where Nature intended Irish potatoes should be grown, although even as late as 1899 Bergen County farmers grow upward of 200,000 bushels each year (with a knowledge that New York's famed Irish Finest still loved potatoes).

WITH a production of 1,200,000 bushels of potatoes in 1869, Monmouth County stepped close to the forefront of all American potatolands. Monmouth's fabulous production caused a pressing need for a good potato digger. A local boy, Thomas B. Stout, made good in 1853 by patenting a digger. Still the need for digging machinery continued great. The Monmouth County Agricultural Society appointed a committee in 1856 to hold a trial of "machines for digging potatoes by horsepower."

Machines or no, the Monmouth potato plantations got their 'taters out of the ground—mainly by hand, since a hired man cost only \$7 a month plus board (at a table where potatoes appeared at every meal). Into broad wagons went the loose potatoes, 30 to 35 bushels per load, and long lines of wagons creaked off to Keyport, Matawan, Red Bank and other seaside shipping points to load their hauls on sloops. The captain of the sloop undertook full responsibility to sell the potatoes in New York.

Potato output from New Jersey fields went up and down in unpredictable fashion between the Civil War and 1900. Acreage varied amazingly from year to year—everything from 30,000 to 60,000 acres being recorded over that 35-year span. About the only



Pouring freshly-dug sweet potatoes in a water bath for cleansing. Good marketing practices have aided sweet tuber sales in Jersey.

surety was that if prices went up one year, production went up the next—which means overproduction and depressed markets.

ABOVE all, yields per acre ranged wide, from a low of 40 bushels in 1876 to a high of 114 bushels per acre in 1891. Disease, insects, high labor costs, foreign competition and just plain poor cultural practices haunted the potato farmer probably more than any other farmer of the day.

With yields per acre generally low, potato farmers heard with astonishment in 1888 that the editor of The Rural New Yorker boasted he could raise 700 bushels per acre on his River Edge farm in Bergen County. "If I can't, I'll forfeit \$50 to charity," he said publicly. The editor of the rival Farm Journal said he couldn't, put up \$50. Charity couldn't lose.

Large crowds gathered at River Edge on Sept. 28, 1888, for the "Grand Potato Contest." Tension mounted as the first two rows dug gave an average rate of 644 bushels per acre, excitement built to a boiling point as the third row produced at the rate of 1,070 bushels per acre. Rows four and five, however, mashed the hopes of New Yorker fans; those insect-ravaged vines yielded only at the rate of 272 bushels—paring the grand average down to 582 bushels. The Rural New Yorker editor, "not discouraged, vowed to pick up his flint and try again—and, it is but proper to say, promptly paid the forfeit."

Such happy diversions had a sound practical side, because E. S. Carman, The Rural New Yorker editor, gave the potato world some remarkable new varieties (Carman No. 1, Rural New Yorker, Sir Walter Raleigh) that brought potato growing to higher lev-



Potato digging machine in Monmouth County (where the first device was invented in 1853) builds up double rows for pickers. At sorting station (below) sub-standards are eliminated and field dirt removed. Automatic belt (right) speeds packaged product to market.



els. Variety, as a matter of fact, was the real spice of a potatoman's life. In a competitive market something better than the old Mercer or the old Pink Eye (imagine promoting that spud in today's high-pressure markets) had to be discovered. Even the strains of Maggie Murphy and Rose of Erin, while sentimental, weren't prolific.

WAY down Jersey the Cape May Red Skin had wide popularity throughout the 19th Century (and is still a popular Salem County variety). The Red Skin, according to old lore, came to Cape May in 1810 when a grateful South American captain left a few baskets in return for supplies. The Red Skin grew well in South Jersey and kept lean times away from many a fancier's door.

Monmouth County kept far out in front of all New Jersey areas with the American Giant, variety, a long, slender spud which brought good prices in the market. New Jersey potato acreage, planted largely with the Giant, soared to a reasonably steady annual planting ranging from 65,000 to 75,000 acres between 1905 and 1915. Then came World War I, and, as any soldier knows, potatoes had more appeal than ever before. New Jersey produced 12,000,000 bushels in 1915, never went lower than 8,000,000 bushels throughout the war.

Maybe soldiers swore they would never look another potato in the eye again, maybe it was the appearance of the skinny dieting flapper, maybe too many farmers followed the lure of high wartime potato income. At any rate, with production up and prices down, the bottom dropped



completely out of the potato market in 1922—at a time when New Jersey had 95,000 acres in spuds.

An emergency committee of specialists from the Rutgers College of Agriculture and the State Department of Agriculture—plus bankers from Monmouth, Mercer and Middlesex counties—studied potato growing. They found that the farmers' own shortcomings were compounded by intensified competition from outside the state. Perhaps most important, the committee gently scolded farmers for poor grading practices (which resulted in many potatoes being moved out of rail centers, but too few being sold in the market places).

THAT potato depression gave impetus to the careers of two men. One of them, Dr. William H. Martin, headed the emergency committee and eventually became one of the nation's top potato experts (and later became dean of Rutgers College of Agriculture). William B. Duryee, field agent for the committee, later became state secretary of agriculture.

Mr. Duryee put the potato show on the road, with a mock trial written by himself. The trial of "New Jersey Potato" was held in several spud centers and brought crowds of troubled farmers who wanted both information and entertainment. Juries decided in favor of the indicted potato every time, naturally, and their judgments proved right.

Slowly and painfully potato growers came back, aided by intensified research at Rutgers. Acreage dropped all the way back to 36,000 acres in 1929. The American Giant variety disappeared rapidly from the state—in 1921, 80 per cent of all Monmouth County acres had been in Giant; by 1926, scarcely any farmer stuck with the slender tuber. Instead, most turned to the big round Irish Cobbler.

The Cobbler, according to a per-

sistent story, was perfected by one Patrick Ryan of Lumberton (an Irish cobbler, needless to say). Sure 'n' that's a nice tale, and only fittin' too. True or not, potato men danced their way upward to the tune of the Irish Cobbler. On the eve of World War II a solid potato pattern had developed with production concentrated in Monmouth, Mercer and Middlesex counties. Those three counties produced about 70 per cent of all New Jersey potatoes in 1939.

As white potato growers fought the battles of overproduction, poor field practices, shoddy marketing habits and declining demand, sweet potato men had troubles of their own. The eve of World War II is a good time to switch attention from the Irish potato to its Orange rival in the Jersey underground.

SOON after the Revolutionary War, Gen. Nash, a fighting Revolutionary Tar Heel war hero from North Carolina, settled his family in Hackensack. The impressive general (6 feet, 5 inches tall and 400 pounds around) toted some sweet potatoes from his native Southland, where the so-called "Bermudian" potatoes had long been relished. Before his death in 1801 Gen. Nash successfully grew sweets in Bergen County.

First statistical records in 1849, however, showed Gloucester County firmly established as the sweet potato capital of the state. Gloucester that year grew well over 50 per cent of the 508,000 bushels harvested in New Jersey; 50 years later, when the state produced more than 2,000,000 bushels, half still came from Gloucester.

Other South Jersey regions realized the sweet tuber somehow found nourishment in the sandy soil. A Ham-monton minister wrote in 1872 that "as for sweet potatoes (in the Ham-monton area)—both in quantity and quality—I should think they were

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unsurpassed the world over." The widespread failure of vineyards in the early 1880s turned many Atlantic and Cumberland county growers to sweet potatoes.

NOT surprisingly, therefore, sweet potato acreage rose to an all-time high of 22,500 acres in 1909 and an all-time high of 3,186,000 bushels the same year. Then, as diseases swept the sweet potato fields, the yellow root no longer meant gold to farmers. By 1929, sweet potato production had dropped to 1,500,000 bushels—the lowest total in recorded New Jersey history.

Much like their white potato growing brethren, the growers of the Big Stem Jersey, Little Stem Jersey, the Jersey Yellow and the Gold Skin surged back in the 1930s. Production edged up to more than 2,000,000 bushels in 1939 and the region of sweet potatoes had become fairly well generalized. Gloucester County still led in production, with about one-third of all Jersey sweets, but Atlantic and Cumberland ran close seconds (each growing about 20 per cent of the state total).

Statistics for 1941, released just as the Japanese slammed at Pearl Harbor, showed New Jersey had 56,000 acres in white potatoes, 15,000 acres in sweets. White potato yields had leveled off at about 10,000,000 bushels annually, a figure so closely approximated over a five-year period that it appeared just about the right output for the state.

Demands for white potatoes soared incredibly during World War II. The federal government moved to encourage farmers to keep their eyes to the ground and promised a subsidy if more potato acreage could be found. No such offer came forward for sweet potato growers (possibly on the grounds that sweet potatoes offered only moderate toughening-up for a knife-wielding private on KP).

ACREAGE in New Jersey for Irish potatoes climbed to 71,000 acres in 1945, when 12,567,000 bushels were produced. Nevertheless, when adverse weather conditions swept the state in 1944, the average yield plummeted to 130 bushels per acre. Potatoes became extremely scarce. Many a potato grower remembers tempting offers made by itinerant buyers for any kind of spuds, including even vital seed potatoes needed for 1946 planting.

Production stayed way up, long after V-J Day, mainly because the government bought 75 to 90 per cent of all New Jersey potatoes at a nice high support price. Even a cut-back in acreage didn't slow the piles of spuds; farmers simply planted only their best land and tossed on the fertilizer. Thus, an acreage slash from 52,000 acres in 1948 to 36,000 acres in 1950 cut output scarcely at all—because in 1950 New Jersey potato men turned up an average of 329

bushels of spuds per acre (an all-time high).

Something had to be done about government subsidies, and potatoes offered a likely whipping boy. The public saw huge mounds of potatoes reposing in Monmouth County fields, colored blue to prevent sale to the public. Accustomed to paying high prices for potatoes over the counter, the public saw red even as it saw blue. Blue potatoes piled high in open fields dramatically brought the subsidy issue into the open (unlike butter turning rancid in hidden caves or wheat anonymously gaining mold in expensive government-built granaries).



Storing Atlantic County "sweets" in high humidity shed. Producers and Rutgers Agricultural Experiment Station perfected the method.

All potato supports disappeared in 1951—and many a New Jersey potato grower found he had lost the knack of selling in the open market (if, indeed, some of the war-spurred growers ever had it at all). Painful readjustments took place; marginal producers forgot all about potatoes and planted their fields in wheat or corn. Even old-line, top-notch potato men cut acreage back drastically—until in 1952 potato fields totaled only 26,300 acres in the state. That year only 4,866,000 bushels were produced, only the second time since 1901 that fewer than 5,000,000 bushels of potatoes came from New Jersey soil.

Last year acreage declined to 23,000 acres, the lowest in New Jersey since the 1830s. High yields per acre, however, brought 5,675,000 bushels—enough to maintain New Jersey's position as the country's foremost producer of Irish potatoes for the summer markets. Most agriculture ex-

perts figure that the low point has been reached; peacetime white potato acreage in the state will probably level off at about 25,000 to 30,000 acres.

The acreage is still readily available in potato areas, if ever needed again, but potato farming is largely a gamble—just as it has been since the very beginning. That's one reason why so many oldtimers have quit raising potatoes; a man can't make as much on wheat or soybeans as he can on spuds—but he can't lose as much, either.

Take one Middlesex County potato man as an example in 1954, one of the driest years on record. He had \$100,000 invested in his 200 acres of potatoes before he so much as sold a pound. He eventually averaged close to 400 bushels per acre because of high-priced irrigation and plenty of

dieting, in which the potato is a symbol of dietary courage—giving up potatoes is so much easier than giving up beer (low calory, all) or after-bridge dessert. In addition, the potato has not had the high-priced promotion given many other foods.

Moreover, canned and frozen foods have made American womanhood veer away from paring potatoes. To meet this crisis, potato producers are pushing such prepared items as potato chips and frozen French fries in the hope that mere ease of serving will help the potato come back into its own. Unless the potato gains back some of its erstwhile favor, don't expect New Jersey potato acreage to increase (or any other potato acreage, either).

SWEET potatoes are another matter. Aided by the highest output per acre in the nation, New Jersey sweet potato men last year edged closer to the 3,000,000-bushel mark than at any time since 1909. There are many reasons—improved varieties (particularly the recently developed Jersey Orange), better means of controlling disease, better cultural practices.

Most important, the sweet producers and Rutgers Agricultural Experiment Station have perfected new high humidity storage methods, which permit spreading the sale of their potatoes over long periods of time. This has been coupled with an outstanding program of promoting "Jersey Sweets"—by extolling their merits in newspaper, magazines and on radio and television.

New Jersey sweet potatoes are appearing in ever-widening market areas. New England, for example, likes "Jersey Sweets" far more than the moist Louisiana yams—and increasing quantities of sweets from Atlantic, Cumberland and Gloucester are appearing in Boston markets. The probability is that sweet potato production will continue to rise, particularly since sweets do so well on the light sandy soil unsuited for other crops.

ACCORDINGLY, after all these years, sweet potatoes and Irish potatoes are almost eye to eye as far as economic importance in New Jersey is concerned. It has taken 150 years for them to level off, to locate their culture finally in areas where they belong—white potatoes in the chocolate-brown loams of Monmouth, Middlesex and Mercer counties; sweets in the loose sandiness found in much of Atlantic, Cumberland and Gloucester.

Be assured that potatoes, both white and sweet, are by no means over the hill; both will continue to be valuable in New Jersey—and if ever the general public realizes that the average Irish potato has exactly the same number of calories as the average apple, white potato acreage may be restored to former levels.

A potato poet said it this way in 1929 in the American Potato Journal: "... for when some dame, size 46, learns eating spuds reduces weight, she'll give those other things the gate and eat potatoes by the crate in hopes to be size 38." Wise words, those—even if "thirty-eight" and "Christian Dior" don't exactly rhyme in 1955.

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